

was visited, and his interesting collection of Palearctic birds was inspected.

Altogether the Meeting was very successful, and sufficed to prove that ornithological activity in Germany is rather increasing than diminishing.

It was decided that the next Annual Meeting of the German Society should be held in Berlin during the session of the Zoological Congress in August 1901, and a hope was expressed that some of their foreign ornithological colleagues would then be the guests of the Society.

X.—Notices of recent Ornithological Publications.

1. *Annals of Scottish Natural History.*

[The Annals of Scottish Natural History. No. 35, July 1900, and No. 36, October 1900.]

In an interesting article Professor Newton gives an account of his observations on the Great Shearwater, *Puffinus gravis* (O'Reilly), in Scottish waters; in the first instance near the Butt of Lewis on the 27th of June, 1894, and, secondly, on the 24th of June, 1895. The birds were in considerable numbers, and most of them were sitting in couples on the water. None were seen to dive, nor did any of them on those occasions strike the water with great violence in pursuit of food, as described by Captain J. W. Collins in the 'Annual Report of the [American] Commissioners for Fish and Fisheries for 1882,' p. 315, and also by Mr. Robert Warren in 'The Zoologist,' 1894, p. 22.

Mr. A. Nicol Simpson's "Contribution to the Ornithology of Kincardineshire" is concluded in the October number, and relates to a part of Scotland on the birds of which little has been written. Lt.-Col. Duthie gives an account of the semi-domesticated Greylags (*Anser cinereus*) of Blair Drummond, the descendants of a pair introduced from North Uist about twelve years ago. Among the usual short notices, Mr. Eagle Clarke's record of the occurrence of *Scops giu* towards the end of April on the remote island of Foula, in

the Shetlands, shows a remarkable extension of that bird's range; North Ronaldshay, Orkney, in 1892, having been hitherto the furthest north that it has reached.—H. S.

2. 'The Auk.'

[The Auk. A Quarterly Journal of Ornithology. Vol. xvii. Nos. 3 and 4, July and October 1900.]

The first paper in the July number of 'The Auk' is by Mr. H. W. Henshaw, on the "Occurrence of *Larus glaucescens* and other American Birds in Hawaii"; but inasmuch as the writer persistently speaks of certain Gulls by the trivial name of "Glaucous Gull," we are unable to recognise the exact species to which he refers, for *Larus glaucescens* and *L. glaucus* are perfectly distinct. We expected to find a correction or explanation of this error in the October number, but see none. The remaining birds identified in the Hawaiian group are *Diomedea chinensis*, *Mergus serrator*, *Crymophilus fulicarius*, *Calidris arenaria*, and *Gallinago delicata*, while other migratory species are hinted at. Mr. W. Brewster describes the breeding-habits of *Clangula clangula americana*, with two plates; Mr. W. Palmer treats of the "Ecology of the Maryland Yellowthroat and its relatives" (*Geothlypis*); Mr. J. O. Snyder has a short paper on the Birds of Idaho and Washington; Mr. Henshaw describes a new species of Shearwater, *Puffinus newelli*, from Hawaii; and Mr. A. W. Anthony contributes an interesting account, with a plate, of the nesting-habits of the Pacific-coast members of that genus. The names of the thirty new species of birds described by Mr. E. W. Nelson from Mexico may be left for the Zoological Recorder, who will also note Mr. Heber's new subspecies of the genus *Hylocichla*. Dr. T. H. Roberts gives a very full account, with illustrations, of the nesting of *Larus franklini* in Southern Minnesota, which shows that it breeds much further south than was supposed; and Mr. Outram Bangs sends notes on a collection of birds from the Bahamas.

The frontispiece of the October number of our contemporary illustrates a paper by Mr. Frank Bond on the

nuptial performance of *Centrocerus urophasianus*. Professor J. A. Allen follows with an article on "Aptosochromatism," to which Mr. Bonhote may possibly be inclined to reply; and Mr. Carroll gives notes on the birds of Refugio County, Texas. Mr. W. H. Kobbe's account of the birds of Cape Disappointment, Washington State, deserves mention. Students of American Ornithology will appreciate Prof. Allen's remarks on North-American birds collected at Santa Marta, Colombia. Mr. Jonathan Dwight, Jun., has a long paper on the Moults of North American *Limicolæ*, which should be compared with Prof. Allen's aforesaid article on "Aptosochromatism." Among the minor notices, the record of our European Linnet (*Linota cannabina*) in New York State is interesting.—H. S.

3. *Bangs on a new Geotrygon.*

[A new Dove from the Sierra Nevada de Santa Marta, Colombia. By Outram Bangs. Proc. New England Zool. Club, i. p. 107, May 1900.]

The form of *Geotrygon* found on the Sierra Nevada of Santa Marta is separated from *Geotrygon linearis* (of Bogota) as a new subspecies—*G. l. infusca*.

4. *Bucknill's 'Birds of Surrey.'*

[The Birds of Surrey. By John A. Bucknill. 8vo. London: Porter. 1900. Pp. lvi, 374. 21s.]

Though the ornithology of Surrey has by no means been neglected in the past, as may be seen from the articles in 'Loudon's Magazine,' 'The Zoologist,' and elsewhere, by E. Newman (Rusticus), E. Blyth (Zoophilus), and others, nor have writers of the present day failed to interest themselves to a considerable extent in its Avifauna, the county has been singularly unfortunate in that it has never commanded the undivided attention of any author, with regard to its Birds, until so near the end of the century.

In the volume before us, however, Mr. Bucknill has undertaken to supply the deficiency, and has given us a very full list of the occurrences of the various species, with accounts in considerable detail of their distribution. The

book cannot be considered wholly satisfactory, as somewhat too much reliance is at times placed on the testimony of little-known authors, while the works of F. O. Morris and "A Son of the Marshes" are apparently accounted "standard" and are placed on a level with those of Yarrell and so forth.

The Charterhouse School collection of birds, selected from that formed by the late Mr. William Stafford of Godalming, has nevertheless given the author a firm basis of facts on which to ground his structure; and, as he is most careful to inform us what his authority is in each instance, we can judge for ourselves how far it may be trusted.

A bibliography is followed by an introduction of 31 pages, in two nearly equal parts, which consists firstly of an account of the natural features of Surrey given in a most full and pleasing manner, and secondly of a bibliographical portion of considerable value. The illustrations consist of six admirable photogravures of local scenery after L. Danielsson, and thirteen reproductions of drawings by Mrs. Bell and H. W. Murray, with a map of the County.

The book is evidently the work of one who is thoroughly conversant with the district, though he is careful not to state with undue precision the exact habitat of the rarer breeding species.

5. *Butler on the Birds of the Andamans and the Nicobars.*

[The Birds of the Andaman and Nicobar Islands. By A. L. Butler, F.Z.S. Journ. Bombay Nat. Hist. Soc. xii. pp. 386, 555, 684; xiii. p. 144.]

Mr. A. L. Butler, F.Z.S., Curator of the Selangor State Museum, visited the Andaman and Nicobar Islands in 1897 and 1898, staying about nine months at Port Blair, and six weeks on some of the Nicobar Islands. In the present memoir he gives us an account of his own researches into the bird-life of the two groups, and compares them with the observations of Messrs. Hume and Davison in 1873*.

* See Mr. Hume's articles in 'Stray Feathers,' vol. ii. pp. 29-334 and pp. 490-501; also *op. cit.* vol. iv. pp. 279-294.

Altogether Mr. Butler includes 209 species in the Avifauna of these islands, and adds many excellent field-notes. A coloured figure is given of *Astur butleri* Gurney (Bull. B. O. C. vii. p. xxvii), which is "not uncommon in the forests of Car Nicobar."

Mr. Butler should have added to his paper a list of the species peculiar to the Andamans and Nicobars, and pointed out their nearest allies on the continent. This would have helped us to find out how these islands became stocked with bird-life. Geographically they are an extension of the ridge of Sumatra, and probably their zoological alliances are in the same direction, although this does not seem to have been Mr. Hume's opinion.

6. Büttikofer on the Birds of Central Borneo.

[Zoological Results of the Dutch Scientific Expedition to Central Borneo.—Birds. By Dr. J. Büttikofer. Notes Leyden Mus. xxi. p. 145.]

Dr. Büttikofer has already given an interesting general account of his expedition to Central Borneo in his preface to Dr. Jentink's essay on the Mammals procured for the Leyden Museum on that occasion. The report on the Birds of the expedition, now before us, has been delayed by the circumstances of the author's appointment to the Directorship of the Zoological Garden of Rotterdam.

In the present memoir Dr. Büttikofer adds to the list of the birds obtained by himself and his companions during the Central Bornean Expedition an account of a small collection made at Pontianak near the west coast by Mr. Moret, one of his assistants, after his return, and of others made by Dr. A. W. Nieuwenhuis and by Mr. Westenenk, some of which were from Eastern Borneo; and thus he reports altogether upon specimens referable to 269 species. A comparison of the Western and Eastern collections shows that, so far as the lowlands are concerned, the Avifauna of this part of the island is nearly homogeneous. Contrary to Dr. Büttikofer's expectations, as he was exploring a district ornithologically unknown, and as he paid special attention to the more obscure and local forms,

not one of the 269 species enumerated proved to be new, and only two (*Harpactes orrhophæus* and *Cyanoderma poliogaster*) are additions to the Bornean Ornis. But a number of useful notes of all kinds will be found to accompany the list, and various species of special interest are emphasized. *Glaucidium sylvaticum* Bp. is held to be the correct name of *G. borneense* Sharpe, Bornean specimens being inseparable from those from Sumatra. Numerous specimens of *Calyptomene hosii* Sharpe were obtained by this expedition in the dense forests of the Liang Koeboeng range. In *Trichostoma rostratum* the male has the tarsi abnormally short (18 mm. instead of 25)—a very curious phenomenon, already noticed by Dr. Büttikofer (N. L. M. 1895-96, p. 87), but now clearly proved. A mated pair of the rare *Myiophoneus borneensis* were obtained during the expedition, and the nest and eggs taken. They are now described. Four pairs of the peculiar Bornean Pheasant, *Lobiophasis bulweri*, were procured in the dense mountain-forests.

Appended to this paper are good coloured figures (by Keulemans) of *Glaucidium sylvaticum*, *Siphia everetti*, and *S. beccariana*.

7. Cook on the Antarctic Ornis.

[Through the First Antarctic Night, 1898-1899. By Frederick A. Cook, M.D. London: Heinemann, 1900. 1 vol. 8vo. 478 pp. Price 20s.]

Dr. F. A. Cook, Surgeon, Anthropologist, and Photographer to the Belgian Antarctic Expedition of 1898-99, gives us a vivid account of the incidents of the voyage of the 'Belgica' and of his year's detention in the Antarctic ice. We need not here enlarge on the geographical and other general results attained, but may call attention to the frequent references to birds throughout the volume. Penguins are of course one of the leading features of animal life in Antarctica, and appear to be found there in greater or less abundance throughout the year. They supply fresh meat of a very healthful, if not of a very savoury quality. "Several lives," we are told (p. 334), "have certainly been saved by eating Penguins." Moreover,

they were so kindly disposed as to come and be caught when summoned. "At meal-time a cornet is used to call the men together. The Penguins, when they hear it, make directly for the ship. In this manner we have only to wait and seize our visitors to obtain penguin-steaks, which are just at present the prize of the menu."

It seems that *Pygosceles adeliæ* is the prevalent species of the Antarctic islands, and breeds there in "countless millions." Frequent references are also made to the Emperor Penguin, *Aptenodytes forsteri*, specimens of which were obtained.

In the appendix on the general results of the expedition, the following short report on the bird-life will be found:—

"The birds constantly present upon the ice-paek are not numerous: the very large Petrel (*Ossifraga gigantea*), the Snow-Petrel (*Pagodroma nivea*), the Antarctic Petrel (*Thalassæca antarctica*), the Brown Sea-Gull (*Megalestris antarctica*), Forster's Penguin (*Aptenodytes forsteri*), and the Adelia-land Penguin (*Pygosceles adeliæ*) are the most common species."

The collection of birds made by the 'Belgica' has been sent to Mr. Howard Saunders, and a scientific account of it will be published hereafter. A Roumanian, Emile Racovitza, was the Naturalist to the Expedition.

8. Currie on a new Bird of Paradise.

[A new Bird of Paradise. By Rolla P. Currie. Proc. U.S. Nat. Mus. xxii. p. 497.]

This supposed new species, which it is proposed to call *Cicinnurus lyogyrus*, is based on a single skin in the U.S. National Museum originally obtained from Mr. A. Boucard. It shows a pectoral shield "nearly four times as long as in *C. regius*," shorter frontal plumes, and other differences, which are described and illustrated in an outlined plate. The specimen is labelled "New Guinea."

9. Euler on the Nests and Eggs of Brazilian Birds.

[Descrição dos Ninhos e Ovos das Aves do Brasil. Por Carlo Euler. Revista do Museu Paulista, iv. p. 9, 1900.]

This is a republication, with additions and corrections and with revised nomenclature, of the four well-known articles on the nesting of Brazilian birds published by the author in the 'Journal für Ornithologie' for 1867 and 1868. In the first section of the article (Parte Descriptiva) particulars of all that has been recorded and is known of the nests and eggs of 223 species are given in systematic order. In the second part (Parta Comparativa) general conclusions are stated as to the mode of nesting and style of eggs of the various groups to which these 223 species belong. In the third part (Parte Biologica) particulars are given as to the number of eggs laid by each species, and as to the season of the year in which nesting takes place.

10. *Finn's 'Fancy Waterfowl.'*

[Fancy Waterfowl. By Frank Finn, F.Z.S. 1 vol. 4to. 46 pp. London, 1899.]

This is a reprint of a series of popular articles that have appeared in 'The Feathered World,' in which the most esteemed Waterfowl usually to be seen in collections on ornamental waters are described and depicted. It will be useful to amateurs as it is, but would have been more so if *all* the species hitherto kept in captivity had been treated of, so as to provide a complete work on the subject.

11. *Ihering on the Birds of Cantagallo and Nova Friburgo.*

[Aves observadas em Cantagallo e Nova Friburgo. Por N. von Ihering. Revista do Museu Paulista, iv. p. 149, 1900.]

As an appendix to Herr Euler's memoir (*suprà*, p. 132) Prof. Ihering has composed a list of the 368 species of birds that have been observed in the interior of the province of Rio Janeiro, in the neighbourhood of Cantagallo and of the adjoining settlement of New Fribourg. Our main authority on this subject is Euler, who laboured long and diligently in this district; but Lund, Burmeister, and others made some additions to the list. After the name adopted for each species, the authority for its occurrence in any locality is indicated by the initials of the collector.

12. *Ihering on the Birds of Rio Grande do Sul.*

[As Aves do Estado do Rio Grande do Sul. Por H. von Ihering. 12mo. Alegre, 1899. 42 pp.]

This is a reprint of an article contributed by Dr. von Ihering to the 'Anuario' of the Brazilian State of Rio Grande do Sul for 1900. After a preface, which contains general remarks on the sources of our knowledge of the Avifauna of this district and on its chief peculiarities, the author gives a complete list of the 362 species known to him as occurring within its limits, adding references to his list of the birds of the State of S. Paulo lately published in the third volume of the 'Revista do Museu Paulista' * and short descriptions of the few species of Rio Grande do Sul which are not found in the State of S. Paulo.

13. *Ihering on the Nesting of Brazilian Birds.*

[Catalogo Critico-comparativo dos Ninhos e Ovos das Aves do Brasil. Por H. von Ihering. Revista do Museu Paulista, iv. p. 191, 1900.]

In this memoir the energetic Director of the Museu Paulista has endeavoured to collect together all the information yet recorded concerning the nests and eggs of the birds of Brazil. The notes are arranged systematically according to the British Museum Catalogue of Birds, and references are given to the principal authorities on each species, while in some cases serious discrepancies in the different accounts of the same nest are pointed out. Some twenty-five nests are illustrated by figures in the text. This is a most useful compilation, and forms an excellent base for future work on a much neglected subject.

14. '*Irish Naturalist.*'

[The Irish Naturalist. A Monthly Journal of General Irish Natural History. Edited by G. H. Carpenter and R. Lloyd Praeger. Vol. ix. Nos. 1-12.]

We are glad to see the ornithological reputation of this Magazine fairly maintained, and it would take still higher rank if certain Irishmen contributed to its support, instead of sending their little papers about Ireland to be published in

* See 'Ibis,' 1899, p. 460.

England! Messrs. Ussher, Warren, Williams, and a few others do their best; and Dr. C. J. Patten gives us an important article, with a map of distribution, on the Ruff (*Machetes pugnax*). The details of a new breeding-place of the Sandwich Tern (*Sterna cantiaca*) on Lough Erne, from notes by Mr. Warren, is an interesting feature; for until recently there was only one colony of this species known in Ireland. Another Snow-Goose, referred to *Chen nivalis* (Forster), is recorded (p. 109).—II. S.

15. *Kastschenko on the Birds of the Altai.*

[Results of the Zoological Altai-Expedition in the year 1898. Vertebrata. By N. Th. Kastschenko. Bull. Imp. Univ. Tomsk, 1899. Pp. 158, 3 pls. (Russian.)]

This work we know only from the notice of it in the 'Zoologische Centralblatt' (Jahrg. vii. p. 815). It gives an account of the results obtained by a small expedition sent out to the Altai under the leadership of Prof. Kastschenko in 1898. The names of the birds observed are stated in the notice. They include *Gypaëtus barbatus*, *Dryocopus martius*, *Sitta uralensis*, *Luscinola fuscata*, *Ruticilla erythronota*, *Accentor altaicus*, *Pyrrhocorax alpinus*, *Otocorys brandti*, *Emberiza leucocephala*, *Charadrius geoffroyi*, and others of interest.

16. *Le Souëf on the Mud-nest-building Birds of Australia.*

[The Mud-nest-building Birds of Australia. By D. Le Souëf. Knowledge, xxiii. p. 92 (April 2nd, 1900).]

Besides the Swallows there are in Australia three species of birds belonging to three different genera that principally use mud in the composition of their nests. These are *Corcorax melanorhamphus*, *Struthidea cinerea*, and *Grallina picata*. Their nests and eggs are described and well figured in this article.

17. *Loomis on Californian Water-birds.*

[California Water-birds.—No. IV. Vicinity of Monterey in Autumn. By Leverett M. Loomis. Proc. California Ac. Sc. ser. 3, Zool. ii. No. 3.]

We have now received another of Mr. Loomis' essays

on the Water-birds of California (*cf.* Ibis, 1897, p. 125). It refers to the species found in the vicinity of Monterey in autumn, and contains much valuable information on their migration. It is held that bird-migration is a habit, evolved by education and inheritance, which owes its origin and perpetuation to winter and the consequent failure of food. This is, no doubt, one great cause; but are there not others?

18. *Merriam on the Birds of Mount Shasta.*

[Results of a Biological Survey of Mount Shasta, California. By C. Hart Merriam. North Amer. Fauna, No. 16, 1895.]

In the summer of 1898 Dr. Merriam and his staff made a complete biological survey of Mount Shasta, "the pride of California," an extinct volcano 14,450 feet in altitude, situated near the sea north of San Francisco and completely cut off from the neighbouring mountains. The report on the Fauna and Flora of this district is very pleasant reading, and beautifully illustrated by numerous figures in the text.

The birds obtained and observed are referred to 136 species, the list of which is arranged according to the American Check-list and contains many excellent field-notes. One of the "most common, most characteristic, and most interesting" birds of the higher slopes of Mount Shasta is Clark's Crow or Nutcracker (*Nucifraga colombiana*), of which a pretty figure is given (p. 120). It usually feeds on the seeds of the white-barked pine (*Pinus albicaulis*), as the European Nutcracker does on those of the cones of *P. cembra*, while it ranges up to the edge of the snow at 11,000 feet. The Humming-birds of Shasta are *Selasphorus rufus* and *Stellula calliope*, the latter being the more common at high altitudes.

Besides the special lists of animals, the chapters of this report on the 'Life-zones of Shasta' deserve the careful attention of the naturalist.

19. *Norfolk and Norwich Naturalists' Society's Transactions.*

[Transactions of the Norfolk and Norwich Naturalists' Society. Vol. vi. Pts. 2-5, Vol. vii. Pt. 1. Norwich, 1896-1900.]

A natural desire to wait for the accumulation of papers on

ornithology in the pages of our much valued contemporary has led to a longer delay than was contemplated, but we now resume the continuity of our notices of its good work. In Part 2, Mr. J. H. Gurney gives an account of the behaviour in life and the appearance in death of *Sceloglaux albifacies*, an Owl which is said to be nearly extinct in New Zealand. Professor Newton follows with an interesting record of the breeding of the Spoonbill in Norfolk as long ago as the reign of Edward I. ; the bird being mentioned in the Patent Rolls, under the date of March 22nd, 1300, by its ancient name (Latinized to suit the language of the document) of "Popeler:" "cognate with or corrupted from the Dutch *Lepelaar*." In Part 3, Mr. Gurney has a suggestive paper on the tendency in certain birds to resemble other species ; and he afterwards relates the results of his ornithological experiences in Switzerland, illustrated by a reproduction of Fatio and Studer's map showing the distribution of *Cypselus melba* during the breeding-season. Mr. J. E. Harting sends some notes on Hawking in Norfolk, supplementary to his paper in a former part of the 'Transactions' (vol. iii.) and a communication of Mr. Southwell in vol. v. Mr. H. E. Dresser gives a sketch of the affinities and distribution of some of the rarer European Warblers, with special reference to the capture of Pallas's Willow-Warbler (*Phylloscopus proregulus*) at Cley in Norfolk. A coloured plate of it, reproduced by permission from the late Lord Lilford's 'Birds of the British Islands,' is added. The specimen is now in the valuable collection of Mr. E. M. Connop, of Rollesby Hall. A list, by Mr. W. G. Clarke, of the birds found in the neighbourhood of Thetford occupies pp. 306-325. In Part 4, Mr. Southwell gives an interesting account of Feltwell Decoy, and also of the St. Helen's Swan-pit ; he further describes the acquisition of one of the indigenous Norfolk Bustards, shot on Swaffham Heath about sixty years ago. Mr. S. F. Harmer describes some bones of a Pelican from the Cambridgeshire Fens. In a valuable paper Mr. Gurney discusses at some length the economy of the Cuckoo, and calls attention to several important points which require further attention. Among the minor notices are records of the occurrence of

the Black-browed Albatross in Cambridgeshire [in 1897] ; of *Larus cachinnans* near Yarmouth ; and of a Tawny Pipit, also near Yarmouth, this being, strange to say, the first record of the species for Norfolk, though one has been ascribed to Lowestoft, in the next county. In Part 5, Mr. Gurney sketches the distribution of the Bearded Tit in England ; Mr. W. Warde Fowler has a short article on birds observed in the Valley of the Somme ; Mr. G. H. Caton Haigh gives details of the acquisition of *Lusciniola schwartzi*, new to England, and even to Europe ; and Messrs. Gurney and Southwell contribute a very useful supplement, with many additions, to their former list of Norfolk birds.

In Part 1 of vol. vii. the ornithologist will find much to interest him in Mr. W. A. Nicholson's article on Sir Thomas Browne as a naturalist, and Mr. Southwell contributes one of his semi-antiquarian papers on Wildfowl-driving in the sixteenth century ; while Professor Newton sends a note on the devouring of a Great Bustard, which was probably of Norfolk origin, at a banquet chronicled in 'Memoirs of the Vernon Family' in March 1675. In concluding this notice, we must not omit to say that in each Part Mr. Southwell records the additions to the Norwich Castle Museum, while Mr. A. Patterson's successive Natural History notes from Yarmouth deserve honourable mention.—H. S.

20. *North on a new Australian Bird.*

[Description of a new Bird from North-west Australia. By A. J. North, C.M.Z.S. Victorian Naturalist, xvii. p. 78, 1900.]

Eremiornis carteri is a new genus and species of Timeline birds, of which two specimens were obtained by Mr. Tom Carter at North-west Cape, near Exmouth Gulf, N.W. Australia, in July 1899. "The slender bill, short tarsi, small feet, and abnormally long upper and under tail-coverts" distinguish this form from other Australian genera.

21. *Palmer on Economic Ornithology in the U.S.*

[A Review of Economic Ornithology in the United States. By T. S. Palmer. Repr. from Yearbook of Dept. Agricult. for 1899.]

This is a very interesting account of what is being done in

“Economic Ornithology” in the United States. A somewhat similar system, if it could possibly be kept within due limits, might be of advantage in England. “Economic Ornithology” deals with birds in their relation to agriculture, horticulture, trade, and sport; it treats of species important to the farmer, the fruit-grower, the game-dealer, the milliner, and the sportsman—in short it is the practical application of our knowledge of birds to the affairs of everyday life.” In the present treatise the history of Economic Ornithology in the United States is considered under three heads:—(1) Investigations as to the value of birds; (2) their commercial uses; and (3) measures for their preservation and destruction, and for the introduction of important species. Although much had been done (wisely or unwisely) by previous workers in all these departments before 1885, it was the selection of Dr. C. Hart Merriam for appointment to what was shortly afterwards named the “Division of Biological Survey” in the “Department of Agriculture” that first led to systematic and continuous work on this subject.

We cannot undertake even to mention all the numerous investigations pursued by the Department since its institution, but will call attention to some of its principal pieces of work. Researches as regards birds supposed to be injurious—such as Hawks, Owls, and Crows—have been largely carried out, as we know by the reports on this subject frequently noticed in our Journal. The Biological Survey has a collection of some 32,000 birds’ stomachs, which are gradually being examined and reported upon. Some birds hitherto considered more or less noxious have been pronounced “not guilty,” even the Crow being considered to do “more good than harm,” whilst the “English Sparrow” is the only species that has been unreservedly condemned. “Game-birds” generally are pronounced to be useful to the farmer, and their consumption in North America as food seems to be enormous, some species (such as the Prairie-fowl and Passenger Pigeon) having now been seriously reduced in numbers by undue slaughter.

Mr. Palmer also tells us much about the wholesale col-

lection of eggs for food which has been practised at various points on the American coasts, and of the destruction of certain species of birds to supply the hateful millinery traffic, and gives us many particulars on these well-known subjects. Lastly, he writes of the guano-trade, which, like "eggs" and "feathers," has been much overworked of late years. A map illustrates the distribution of the 54 islands in the Pacific which have been taken possession of by the citizens of the United States for the purpose of removing the guano; but most of them are now nearly or quite exhausted.

Finally the measures, some wise and some unwise, that have been taken in various States for the destruction and preservation of birds are epitomized; and an account is given of the attempt to contaminate the Neotropical avifauna by the introduction of foreign species. Except in the notorious case of the "English Sparrow," and perhaps in that of the Pheasant, the majority of these, we are pleased to say, are pronounced to have been unsuccessful.

22. *Palmer on the Bird-Laws of the United States.*

[Legislation for the Protection of Birds, other than Game-Birds. By T. S. Palmer. Bull. U.S. Dept. Agric. No. 12, 1900.]

The chief object of this report is to afford information respecting the regulations for the protection of birds (other than game-birds) that have been made in various parts of the American Union. Abstracts of these laws, which have been passed in nearly every State except Alaska, are given under the heads of the names of these States arranged alphabetically. But this is prefaced by a general discussion on protective legislation for birds, which is fully considered in its various aspects. It is certain that, in spite of what has been done, "bird-destruction is going on rapidly in the United States," and that it would be very desirable to effect a greater degree of uniformity in the laws on this subject in the fifty different commonwealths than that which at present exists.

23. *Pike on Bird-land.*

[In *Bird-Land with Field-glass and Camera*. By Oliver G. Pike. 8vo. London: Unwin, 1900. Pp. xvi, 280. Price 6s.]

This little book consists of pleasing studies of bird-life from the pen of an accurate observer of everyday occurrences, who, moreover, shows a proper anxiety for the preservation of the rarer species. The scope of his observations is chiefly confined to the counties lying immediately to the north of London, though three chapters are devoted to the Norfolk Broads; the woods, fields, hedgerows, and streams being all laid under contribution. By various devices, and by the aid of a silent shutter, he has been able to take 83 photographs of birds at very close quarters, even when they are sitting upon or entering their nests. The pictures are of very unequal merit, but those referring to the Bearded Tit on pp. 224, 229, and 231 are quite true to nature.

24. *Pycraft on the Pterylosis of the Megapodes.*

[A Contribution towards our Knowledge of the Pterylography of the Megapodii. By W. P. Pycraft. Reprinted from A. Willey's 'Zoological Results,' Part iv. pp. 483-492, pl. xlix.]

This paper contains one of those important pieces of work in which to find no fault is the highest praise. Consequently we may at once devote our attention to a study of the contents.

The material in Mr. Pycraft's hands consisted of a series of embryos of unknown parentage and one newly-hatched nestling (probably of *Megapodius eremita*) procured by Dr. Willey, together with an embryo of the same species, one of *Megacephalon maleo*, and the type of *Megapodius pritchardi* (in spirit), used for comparison.

New and remarkable points noted by the author are as follows:—(1) The precise details of the pterylography of both adult and embryo; (2) the arrested development in the nestling of the outermost primaries and of the 1st (2nd) cubital remex; (3) the different rate of growth of the forearm from that of the manus in the embryo. With regard to

(2) and (3), the young of *Opisthocomus* and *Gallus* agree with that of *Megapodius*.

We are further informed that the pterylosis is practically the same in the adult and in the embryo, while in both of these the wing is diastataxial (aquintocnital) ; the nestling, moreover, lacks the twelve rectrices found in the full-grown bird.

The nestling *Megapodius* has no *præplumula* [or what might be termed ante-down-feathers], neither are its feathers *præpennæ* [ante-contour-feathers], the latter being shed early in embryonic life or only remaining in the form of transitory rudiments, which may be seen on the tips of the remiges of the ripe embryo. If these represent the *præpennæ* of other birds, they differ in that the rami are disintegrated within an unbroken sheath. Owls have similar plumage during their first year, following upon the *præpennæ*, but *Megapodius* possesses it at birth.

The structure of the nestling-plumage is probably unique ; the feathers have a long, simple, main shaft, with a well-defined aftershaft, both having close-set, bilaterally arranged, delicate rami, beginning near the base and reaching to the tip, while the radii, which clothe the whole of the rami, are often produced into *fila*, the homologues of the hooklets of contour-feathers. The rami at the distal end of the main shaft are basally compressed into blade-like *laminæ*, wherein they resemble those of the *præpennæ* in the young Tinamou.

25. *Reichenow's Birds of Africa.*

[Die Vögel Afrikas. Von Ant. Reichenow. Erster Band. Erste Hälfte. 4to. Neudamm : J. Neumann, 1900. Pp. 320. Price 50s.]

The great interest now taken in African ornithology is indicated by the issue of two special works on it, of nearly the same scope, at the same time. While Capt. Shelley is writing his 'Birds of Africa' in London, Prof. Reichenow is preparing his 'Vögel Afrikas' in Berlin. The first "half-volume" of the latter important work has lately been received in this country. It commences with an essay on the history

of ornithological exploration in Africa, which extends to some 30 pages, and is followed by a very useful list of 1003 publications relating to the subject. After a general introduction, in which two coloured maps show the author's proposed zoological divisions of Africa in comparison with those used by Wallace in 1876, the systematic portion of the work is commenced. This, we are sorry to see, commences at the lowest instead of the highest forms (contrary to what has been the practice until recently in nearly all systematic works). It contains an account of 19 families, from the Struthionidæ to the Ibididæ, containing altogether 273 species. Each of these is described: its chief synonyms and exact range are given, while particulars as to habits, nesting, and other peculiarities are added, so far as they are known. Part II., to complete the first volume, is promised in April next.

26. Seebohm's '*Monograph of the Thrushes.*'

[A Monograph of the Turdidæ, or Family of Thrushes. By the late Henry Seebohm. Edited and completed (after the Author's death) by R. Bowdler Sharpe, LL.D., F.L.S., &c. Part IX. Imperial 4to. London: Henry Sotheran & Co., 1900. Price 36s.]

We have now before us Part ix. of Seebohm's '*Monograph of the Thrushes,*' as edited from his unfinished MS. by Dr. Sharpe. It continues the history of the Blackbirds, of which 14 species are treated in the present number.

The following species are figured:—

Merula simillima.	Merula pritzbueri.
— bourdilloni.	— poliocephala.
— kinnisi.	— tempesti.
— ludovicire.	— canescens.
— flavipes.	— papuensis.
— polionota.	— alpestris.
— melanopleura.	

Merula venezuelensis is a new form of *M. flavipes* from Venezuela, and *M. polionota* another of the same group from Roraima, based mainly on the difference of the female. *M. melanopleura* of Trinidad is a third of the same group.

27. *Selous on Sport and Travel.*

[Sport and Travel, East and West. By Frederick Courtney Selous. Illustrated. 1 vol., 8vo. 312 pp. Longmans: London, 1900. Price 12s. 6d.]

Mr. Selous's narrative of 'Sport and Travel' is mainly concerned with the larger creatures of the Mammalian Class, which were the particular objects of his excursions in Asia Minor and North America. But there are many chance allusions to birds in its pages, and one of the chapters of his adventures in Asia Minor specially refers to ornithology; while, as we all know, the author is a devoted birds'-nester, and never misses a proper opportunity of taking a "good clutch" of eggs with his own hands. The excellent full-page illustration (p. 134) of "Mustapha robbing an Eagle's Nest," and the amusing description of the incident, will at once evoke the sympathies of all true members of the B.O.U. The announcement that a large flock of Great Bustards is habitually to be met with close to a railway-station is sufficient to induce some of our more ardent friends to rush off to Smyrna at once. Moreover, Vultures, Lämmergeiers, and other attractive Raptores are found breeding in this district, besides the numerous Passeres, of which Mr. Selous has already written in this Journal*. To see "quite one hundred" Rough-legged Buzzards flying about the mountain-side together is another attraction to Asia Minor.

28. *Sharpe's 'Hand-list of the Genera and Species of Birds,'*
Vol. ii.

[A Hand-list of the Genera and Species of Birds. (Nomenclator Avium tum Fossilium tum Viventium.) By R. Bowdler Sharpe, LL.D., F.L.S. Vol. II. London. 8vo. Pp. xv, 312. Printed by order of the Trustees of the British Museum. 1900. Price 10s.]

The scope and object of the new 'Hand-list' of the Genera and Species of birds living and extinct have been mentioned in our notice of the first volume of this important work ('Ibis,' 1900, p. 213). The second continues the list of Carinatae, and embraces what we should call the Psittaci

* See 'Ibis,' 1900, p. 405.

and Picariæ, which, according to Dr. Sharpe's Classification, ought to be arranged in the following six "Orders." It should be observed that "Order XVIII. Palamedeiformes," having been accidentally omitted in vol. i., the first Order in vol. ii. is the twenty-eighth, not the twenty-seventh.

	Order.	No. of Genera.	No. of Species.
XXVIII.	Psittaciiformes	83	586
XXIX.	Coraciiformes	218	1237
XXX.	Trogones	10	56
XXXI.	Coccyges	52	238
XXXII.	Scansores	29	218
XXXIII.	Piciformes	64	509
		<hr/>	<hr/>
		456	2844

While fully admitting the value and utility of the new 'Hand-list,' we must once more express our regret that it should commence from the bottom of the Series of Birds instead of from the top—just the reverse of the course pursued in the 'Catalogue.' Some writers will follow the system of the 'Catalogue' and others that of the 'Hand-list,' which will cause much confusion. It should be also observed that all the writers of the individual portions of the 'Catalogue' have followed the "top-to-bottom" plan, which is likewise used as regards these individual portions in the 'Hand-list.' So that the 'Hand-list' proceeds as it were from the bottom upwards by a series of minor descents (from the top to the bottom) in the individual portions. When the ordinary plan of commencing with the higher forms and descending to the lower is followed, we get a uniform descending series, which is much better.

In his Introduction to vol. ii. the author "urges on all ornithologists that full advantage should be taken of any doubt which can prevent the displacement of a well-known generic or specific name by one less-known." This is a most worthy sentiment, to which the many zoologists who are sick of the frequent changes proposed by the advocates of "unlimited priority" will all agree. But we may ask, why is this excellent inspiration not more closely followed by the

author who puts it forward? Take, for example, the generic term "*Chrysotis*" in the Psittacidae, which was accepted, for good reasons, by Count Salvadori (our greatest living authority on the subject) in the 'Catalogue.' Yet in the 'Hand-list' preference is given to "*Amazona*," and it is proposed to alter the name in some 50 species accordingly! On the other hand, we cannot be too grateful to Dr. Sharpe for retaining the name "*Cypselus*" for the Swifts and rejecting "*Apus*," which the advocates of unmitigated priority have attempted to force upon us (*cf.* *Ibis*, 1897, p. 290).

29. *Shelley's 'Birds of Africa,'* Vol. ii. pt. 2.

[The Birds of Africa. By G. E. Shelley, F.Z.S., F.R.G.S. Vol. II. Pt. 2. London: Porter, 1900. 8vo. Pp. 348. Price 21s.]

In the present part of his work Capt. Shelley continues his account of the African Passeres in the manner described in our last notice (see *Ibis*, 1900, p. 560), and treats of the following families:—Promeropidae, Zosteropidae, Parisomidae, Paridae, Certhiidae, and Motacillidae [part]—with which he concludes the second volume. "Parisomidae" is a new family formed to contain *Parisoma*, "*Alcippe*," and their allies. But we cannot quite agree in uniting the African *Lioptili* (which are certainly closely allied to *Parisoma*) to the Asiatic form "*Alcippe*." Altogether 196 species are contained in the present volume, which stops with the genus *Anthus* in the middle of the Motacillidae.

The following species are figured:—

Zosterops ficedulina.	<i>Ægithalus musculus.</i>
Speirops leucophæa.	Motacilla vidua.
Zosterops comorensis	— nigricotis.
Malacirops e-newtoni.	Anthus lineiventris.
Parus xanthostomus.	— crenatus.
— albiventris.	— calthorpæ.
Alcippe abyssinica.	— brachyurus.

Four species appear to be described for the first time in this part:—*Zosterops comorensis* (from the Comoro Islands), *Motacilla nigricotis* (from S. Africa), *Anthus melindæ* (from

British East Africa), and *A. vaalensis* (from Northern Natal and the Transvaal).

30. *Stirling and Zietz on Genyornis newtoni.*

[*Genyornis newtoni*. A new Genus and Species of Fossil Struthious Bird. By E. C. Stirling and A. H. C. Zietz. Mem. R. Soc. South Australia, vol. i. pt. 2. Adelaide: 1900.]

This is a useful reprint, with additions and corrections, of the two articles in the 'Transactions' of the Royal Society of South Australia already noticed (see *Ibis*, 1897, p. 135; 1899, p. 328). The sternum, ribs, coraco-scapula, and wing-bones of *Genyornis* are now described and figured; but we still require an account of the skull, which is promised shortly.

There can now be no doubt that this bird was a gigantic Emeu, rivalling *Dinornis* in its height, which is estimated to have been over 6 feet. Conspicuous differences are the enormous head, huge femur, and the reduction of the number of digits in the outer toe from the normal five to four. On this point the authors remark:—

“ This fact must oppose the view that *Genyornis* stands in the direct ancestral line of the existing members of the group. For the segment in question having been once dropped, it seems impossible that it should have been re-acquired by the later forms. These facts, however, notwithstanding, the Emeu, so far as we have proceeded, would appear to be the nearest ally of the fossil *Genyornis*, though there are undoubtedly resemblances, other than in respect to mere bulk, to the *Dinornithidæ*.”

31. *Ussher and Warren's 'Birds of Ireland.'*

[The Birds of Ireland. By Richard J. Ussher and Robert Warren. London: Gurney & Jackson, 1900. Pp. xxxii, 419. Price 30s.]

Since the year 1851, when the third volume of Thompson's 'Natural History of Ireland' was issued, no detailed account of the Avifauna of that country as a whole has been published, and we are therefore ready, and more than ready, to welcome

the excellent work before us from the pens of those well-known Irish ornithologists, Messrs. Ussher and Warren. But, while heartily congratulating them on the result of their labours, and on the care and accuracy displayed in their pages, we must not forget to couple with their names that of Mr. R. M. Barrington, whose records of observations made at Irish Light-stations have been continually utilized, and whose name was only withdrawn from the title-page of this book on account of the fact that he was simultaneously engaged in preparing a digest of the records already mentioned.

After an interval of nearly fifty years, it is no light task to check the records which have been accumulating, and to bring the lists of occurrences up to date; so that the authors are fully justified in devoting a large portion of their available space to an account of the distribution of the 288 species which they admit. Migration and seasonal movements are, however, duly considered, and that general habits are by no means neglected may be readily seen from the well-written and valuable articles on the Siskin, Cross-bill, Chough, Peregrine Falcon, and Woodcock.

An Introduction on the natural features of Ireland and other matters of interest, tables of distribution of Birds in the breeding-season, a list of their Irish names with the meanings or derivations, an Appendix treating of doubtful species, and two Maps, with the unreclaimed areas distinctly marked, give additional value to the work of the authors.

Schedules were, in the first place, issued to correspondents in every county of Ireland, and a large amount of information thereby amassed, in addition to that gathered by the writers themselves both at home and on their expeditions, and thus it has come to pass that from a supplement to Thompson's work—such as was originally contemplated—the book has grown to its present dimensions.

Ireland is especially fortunate in the number of wildfowl from the north which seek its shores in winter, while the mild climate has at times induced such birds as the Quail and Corncrake to pass that season within its limits. On the

other hand, many species are conspicuous by their entire, or almost entire, absence in summer, among which may be mentioned the Lesser Whitethroat, the Marsh Titmouse, the Hawfinch, the Carrion Crow, the Wryneck, the Green and Lesser Spotted Woodpeckers, the Short-eared Owl, and the Eider Duck.

Of the Missel-Thrush, Redstart, Magpie, Starling, Jackdaw, Swift, Stock-Dove, Ring-Dove, Shoveller, Tufted Duck, and Woodcock an increase is reported, while it is pleasant to hear that the Marsh- and Hen-Harriers and the Eagles still hold their ground in favoured spots. Attention is called to the fact that Giraldus Cambrensis, in the twelfth century, stated that Cranes were then numerous, and the discovery of bones of the Great Auk in the kitchen-middens of Antrim and Waterford is chronicled.

The illustrations are reproductions of photographs by Mr. Barrett-Hamilton and others, with a coloured frontispiece of the eggs of the Peregrine Falcon.

32. 'Victorian Naturalist,' No. 3.

[The Victorian Naturalist, the Journal and Magazine of the Field-Naturalists' Club of Victoria. Vol. xvii. No. 3. Melbourne: 1900. Price 6d.]

The organ of the Field-Naturalists' Club of Victoria usually contains information of interest to the ornithologist, and the part now before us is no exception to the rule. Mr. R. Hall continues his notes on Australian species, and records for the first time a Pardalote (*Pardalotus affinis*) as being the foster-parent of one of the parasitic Cuckoos (*Chalcococcyx plagosus*). He also gives the results of observations on the time required by certain birds to attain the adult state, in which there seems to be considerable divergence. Mr. D. Le Souëf reports an instance of the Australian Eagle (*Aquila audax*) attacking a sheep-dog when following its master.

33. *Vorderman and Finsch on the Birds of Java.*

[Systematisch Overzicht der Vogels welke op Java inheemsch zijn door A. G. Vorderman, van Aanteekeningen voorzien door Dr. O. Finsch. Natuurk. Tijdsch. Ned.-Indië, Deel lx. Af. 1, 1900.]

This is a new and complete List of the Birds of Java, prepared by Heer A. G. Vorderman, a well-known authority on the subject, and revised by Dr. Finsch, of the Leyden Museum. After a short historical sketch of our knowledge of Javan ornithology, commencing with Baron Frederic von Wurmb in 1774, and a list of Heer Vorderman's numerous papers, there follows a catalogue of the 410 Javan birds now known to us, of which 75 are designated as restricted to the island. References are added to the British Museum Catalogue and a few other authorities. A Penguin (*Catarrhactes c'trysocome*) is placed in the list on the authority of a specimen in the Dresden Museum. We should venture to question the authenticity of this locality.

34. *Westell's 'Year with Nature.'*

[A Year with Nature. By W. P. Westell. London: Drane, 1900. Pp. xvi, 276. Price 10s. 6d.]

This book consists of a series of essays on 'Nature,' under the headings of the different months, in the pages of which birds have allotted to them a considerable share. Most of these essays were originally published in magazines or newspapers. However suitable they may have been, both in letterpress and illustrations, to periodical literature, it is a little difficult to understand what object is served by their reproduction in the present form, especially as the author particularly disclaims in his preface any attempt at the cultivation of literary style or artistic merit.

35. *Winge on the Birds of the Danish Lighthouses, 1899.*

[Fuglene ved de Danske Fyr i 1899. 17de Aarsberetning om Danske Fugle. Ved Herluf Winge. Vid. Meddel. fra d. naturh. Foren. i Kbhvn. 1900, p. 159.]

The 17th yearly report on the birds observed at the

Danish Lighthouses is drawn up on the same plan as former Reports (*cf.* Ibis, 1900, p. 216), and is accompanied by the usual excellent map. In 1899, 868 specimens of birds were sent from the stations to the Zoological Museum of Copenhagen, and referred to 56 species. It is curious that such birds as *Alauda arvensis*, *Turdus merula*, and *Erithacus rubecula*, which we should be inclined to class as sedentary in England, are found wandering about in the Danish archipelago.

XI.—Letters, Extracts, Notices, &c.

WE have received the following letters, addressed to 'The Editors' by Mr. D. Le Souëf, Mr. R. Shelford, and Mr. W. L. Slater:—

SIRS,—I notice that Mr. H. C. Robinson, in his "Contributions to the Zoology of North Queensland," in the Bull. Liverp. Mus. ii. p. 115 (1900), treats the *Dacelo gigas* found there as being doubtfully subspecific under the name of "*D. g. minor*." These birds extend from the South-eastern portion of Australia right through to the North-eastern, without any break, and as we go further towards the north they gradually decrease in size, but very slightly. Those found in the extreme north are, therefore, less in their measurements than those from further south, but cannot well be referred to a subspecies on that account, as intermediate sizes are found. The same remark applies to several other birds, such as *Manorhina garrula* and *Trichoglossus nova-hollandiæ*, which also extend over the continent on the eastern side. In Northern Australia some of the birds, which are either weak in flight or local in their ranges, such as *Calyptorhynchus funereus* and *Psophodes crepitans*, have notes slightly different from those of the same kind found in the more southern districts; and as we go from one extreme of the Continent to the other, the note often seems to change gradually. Mr. Robinson mentions the range of *Prionodura newtoniana* as now extending to Mount Peter